

Notice of Allowability

Application No.

10/612,530

Examiner

Wayne Langel

Applicant(s)

LAU ET AL.

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicants' communication of 9-9-05.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 10-27-03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other

The Drawings filed on 7-2-03 are approved.

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This application is in condition for allowance except for the presence of claims 24-36 to an invention non-elected without traverse. Accordingly, claims 24-36 have been cancelled.

The following is an examiner's statement of reasons for allowance: US 2003/0185740 (Chung et al) discloses a method for preparing aluminum nitride by providing an initiator comprising a mixture of aluminum powder and a diluent and placing it into an aluminum container, placing the aluminum container into a reactor with a specific pressure and introducing nitrogen gas into the reactor, and heating the initiator at a specific temperature until igniting, thereby preparing the aluminum nitride. (See the Abstract and Paragraphs [0067] to [0093].) Chung et al suggest in Paragraph [0018] that a solid-state nitride and powdery aluminum may be combusted to prepare aluminum nitride powder. It would be obvious from Paragraph [0018] of Chung et al to include a solid-state nitride in the reaction mixture along with the aluminum and diluent. However there is no teaching, disclosure or suggestion in Chung et al to introduce a re-circulating nitrogen gas through the reactant-containing body in the reaction chamber, or to re-circulate a coolant between an inner wall and an outer wall of the reaction chamber, as required by applicants' claims. Nor would there be any motivation from the prior art to do so. Applicants' specification discloses the advantages of using the nitrogen re-circulation system and coolant from page 15, line 15 to page 17, line 4.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Langel whose telephone number is 571-272-1353. The examiner can normally be reached on Mondays to Fridays from 8 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wayne Langel
Primary Examiner
Art Unit 1754

METHOD AND APPARATUS FOR PREPARING ALUMINUM NITRIDE

Inventors: LAU et al.

Appl. No.: Unknown Atty Docket: TSAI24.001AUS

Sheet 1 of 8

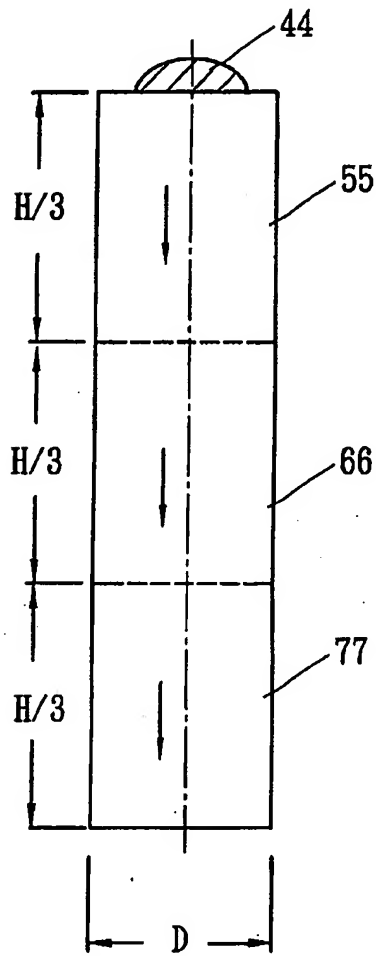


Fig. 1

METHOD AND APPARATUS FOR PREPARING ALUMINUM NITRIDE

Inventors: LAU et al.

Appl. No.: Unknown

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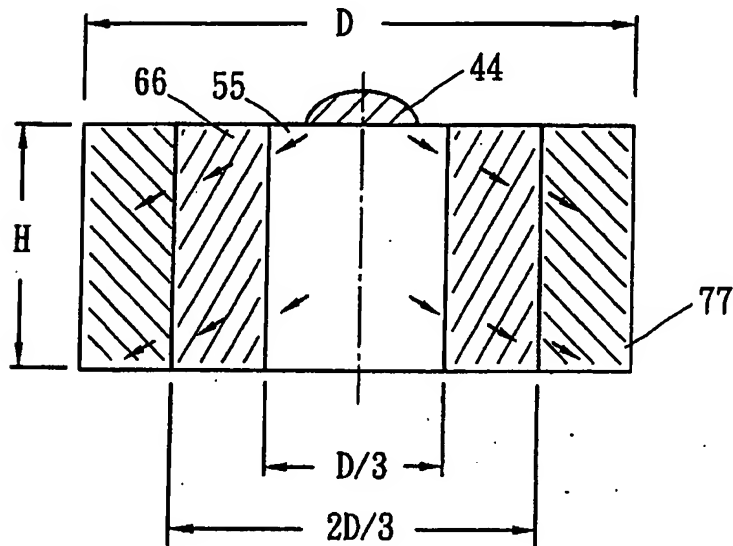


Fig. 2A

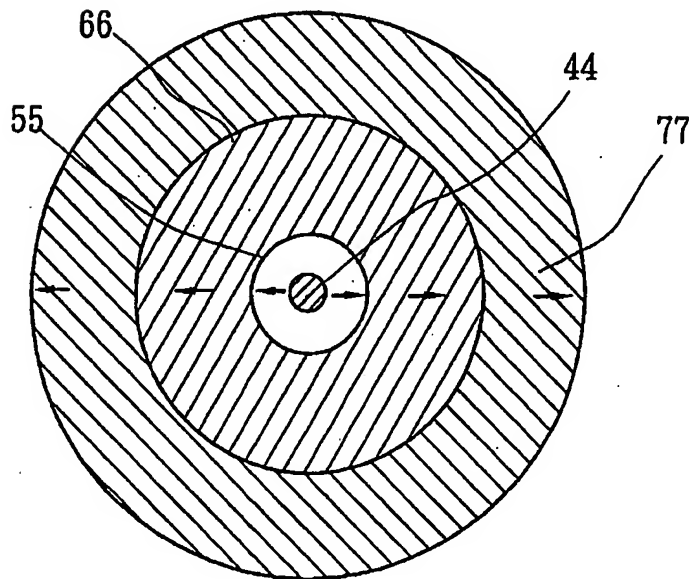


Fig. 2B

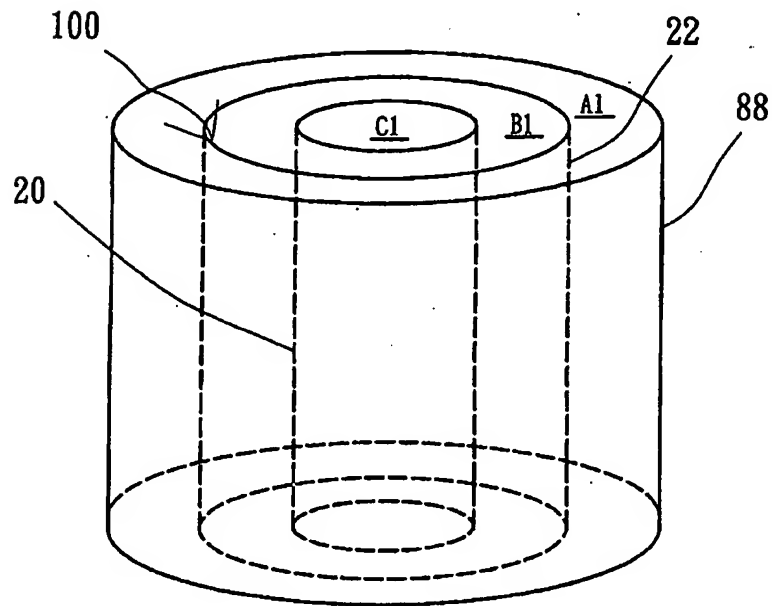


Fig. 3A

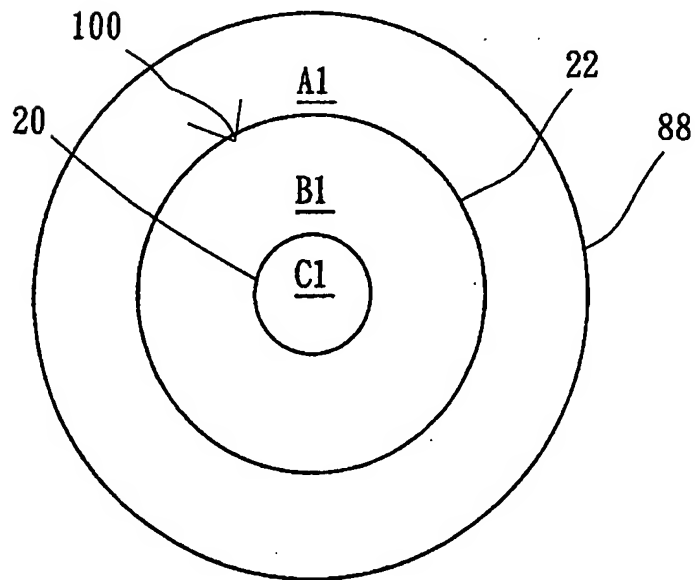


Fig. 3B

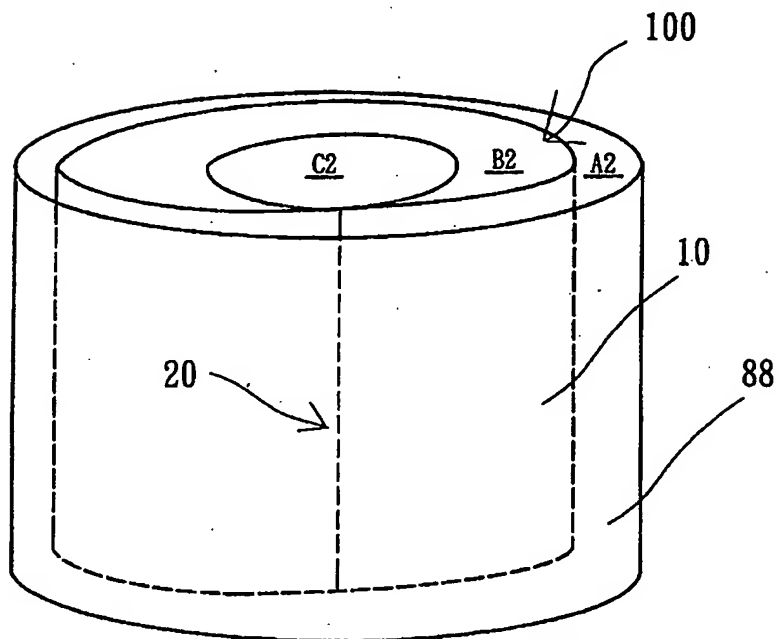


Fig. 4A

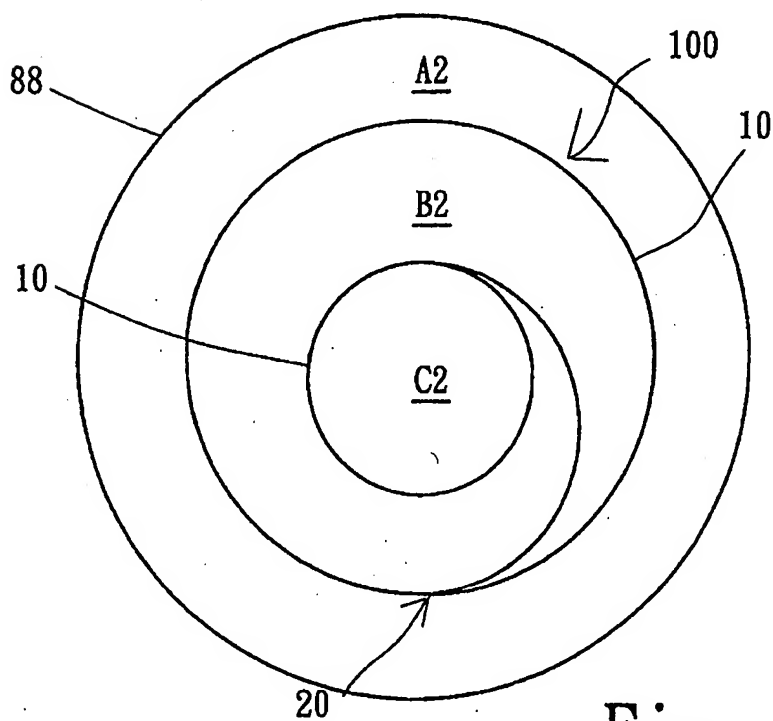


Fig. 4B

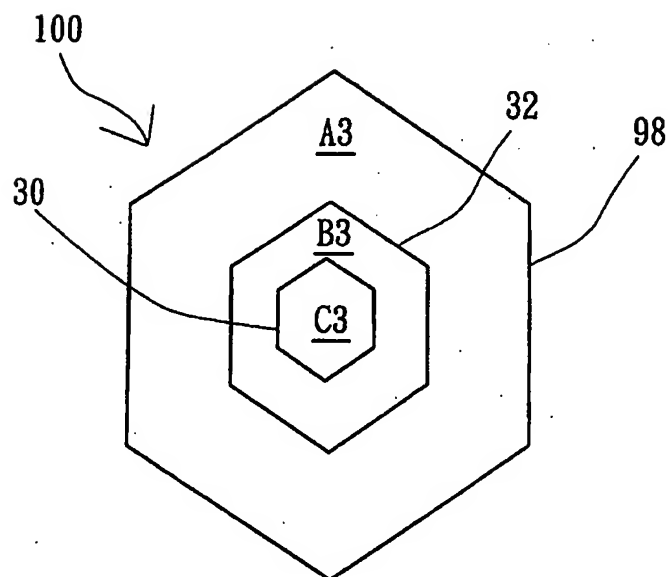


Fig. 5

Fig. 6

METHOD AND APPARATUS FOR PREPARING ALUMINUM NITRIDE

Inventors: LAU et al.

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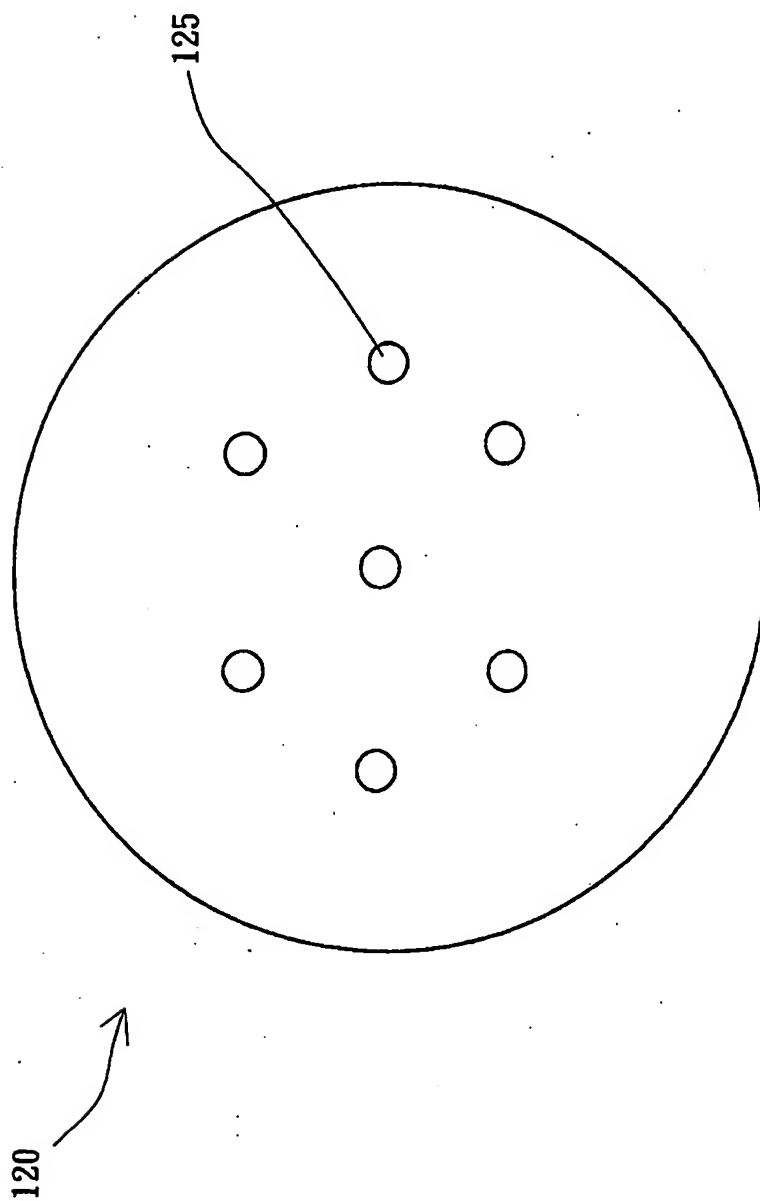


Fig. 7

METHOD AND APPARATUS FOR PREPARING ALUMINUM NITRIDE

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Atty Docket: TSAI24.001AUS

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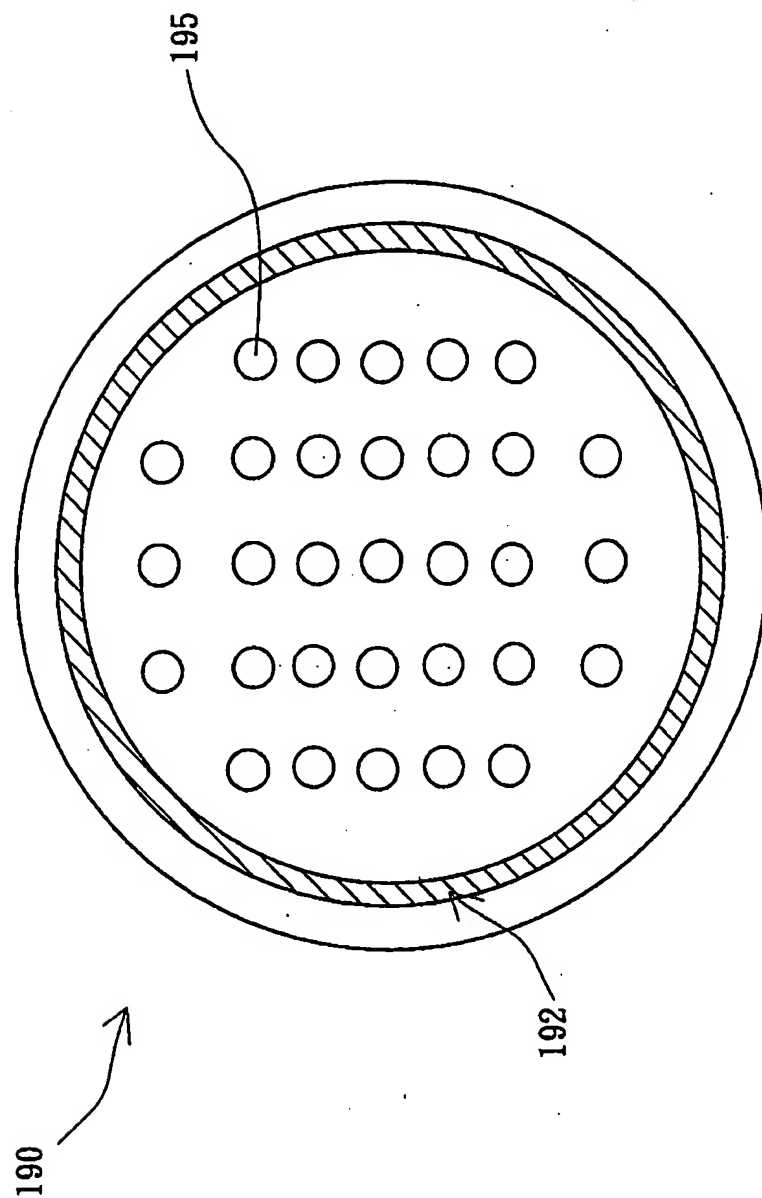


Fig. 8